

What is claimed is:

Sub City  
1. A multivalued information recording method in which energy applied to information units on a recording medium is varied to record multivalued information,

wherein in accordance with a relationship between multivalued information in a predetermined information unit and multivalued information in both of information units adjacent the predetermined information unit, the energy to be applied to the predetermined information unit is decided.

2. A multivalued information recording method wherein the applied energy is light, and to vary the applied energy, power and/or an application time of the light is varied.

3. A multivalued information recording method according to claim 1,

wherein when an information value to be recorded into the information unit and serving as a reference is  $i$  and an average of information values to be recorded into the adjacent information units is  $i'$ , the applied energy is decided in correspondence with  $(i' - i)$ .

4. A multivalued information recording method in which by varying power of light applied to information units on a recording medium, widths of recorded marks are varied to thereby record multivalued information,

wherein when the marks are recorded into the information units, an application time of the light is varied based on a

00612797 071000

relationship contradictory to the power of the light.

Subcl  
cont

5. A multivalued information recording apparatus in which energy applied to information units on a recording medium is varied to record multivalued information, comprising:

a register in which multivalued information to be recorded is stored;

decision means for deciding the energy to be applied to a predetermined information unit in accordance with a relationship between multivalued information in the predetermined information unit and multivalued information of both of information units adjacent the predetermined information unit; and

an optical head for applying the decided applied energy to the recording medium.

6. A multivalued information recording apparatus in which by varying power of light applied to information units on a recording medium, widths of recorded marks are varied to thereby record multivalued information, comprising:

control means for varying an application time of the light based on a relationship contradictory to the power of the light when the marks are recorded into the information units; and

an optical head for applying the light to the recording medium based on a signal decided by the control means.

7. A recording medium having information units in which information is recorded in a multivalued manner by different

00612797 071000

energies being applied thereto,

wherein a condition of a mark recorded in a predetermined information unit is adjusted in accordance with a relationship between multivalued information in the predetermined information unit and multivalued information in both of information units adjacent the predetermined information unit.

ADD AT

Add DI

00012797.071000